

SEQUENCE LISTING

<110> Kosan Biosciences, Inc.
Santi, Daniel
Peck, Larry
Dayem, Linda
Kealey, James

<120> ISOLATED GENE FOR METHYLMALONYL COA EPIMERASE AND USES THEREOF

<130> 30062-20049.10

<140> To be Assigned

<141> Herewith

<150> US 09/699,136

<151> 2000-10-27

<150> US 60/161,414

<151> 1999-10-25

<150> US 60/161,703

<151> 1999-10-27

<150> US 60/206,082

<151> 2000-05-18

<160> 2

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 447

<212> DNA

<213> Artificial Sequence

<220>

<223> Isolated and recombinant form of the full
epimerase gene sequence

<221> CDS

<222> (1)...(444)

<400> 1

atg agt aat gag gat ctt ttc atc tgt atc gat cac gtg gca tat gcg	48
Met Ser Asn Glu Asp Leu Phe Ile Cys Ile Asp His Val Ala Tyr Ala	
1 5 10 15	

tgc ccc gac gcc gac gag gct tcc aag tac tac cag gag acc ttc ggc	96
Cys Pro Asp Ala Asp Glu Ala Ser Lys Tyr Tyr Gln Glu Thr Phe Gly	
20 25 30	

tgg cat gag ctc cac cgc gag gag aac ccg gag cag gga gtc gtc gag	144
Trp His Glu Leu His Arg Glu Glu Asn Pro Glu Gln Gly Val Val Glu	
35 40 45	

05220 2042450

atc atg atg gcc ccg gct gcg aag ctg acc gag cac atg acc cag gtt	192
Ile Met Met Ala Pro Ala Ala Lys Leu Thr Glu His Met Thr Gln Val	
50 55 60	
cag gtc atg gcc ccg ctc aac gac gag tcg acc gtt gcc aag tgg ctt	240
Gln Val Met Ala Pro Leu Asn Asp Glu Ser Thr Val Ala Lys Trp Leu	
65 70 75 80	
gcc aag cac aat ggt cgc gcc gga ctg cac cac atg gca tgg cgt gtc	288
Ala Lys His Asn Gly Arg Ala Gly Leu His His Met Ala Trp Arg Val	
85 90 95	
gat gac atc gac gcc gtc agc gcc acc ctg cgc gag cgc gcc gtg cag	336
Asp Asp Ile Asp Ala Val Ser Ala Thr Leu Arg Glu Arg Gly Val Gln	
100 105 110	
ctg ctg tat gac gag ccc aag ctc ggc acc ggc gcc aac cgc atc aac	384
Leu Leu Tyr Asp Glu Pro Lys Leu Gly Thr Gly Gly Asn Arg Ile Asn	
115 120 125	
ttc atg cat ccc aag tcg gcc aag gcc gtg ctc atc gag ctc acc cag	432
Phe Met His Pro Lys Ser Gly Lys Gly Val Leu Ile Glu Leu Thr Gln	
130 135 140	
tac ccg aag aac tga	447
Tyr Pro Lys Asn	
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<210> 2

<211> 148

<212> PRT

<213> Artificial Sequence

<220>

<223> Deduced amino acid sequence of the epimerase gene sequence

<400> 2

Met Ser Asn Glu Asp Leu Phe Ile Cys Ile Asp His Val Ala Tyr Ala	
1 5 10 15	
Cys Pro Asp Ala Asp Glu Ala Ser Lys Tyr Tyr Gln Glu Thr Phe Gly	
20 25 30	
Trp His Glu Leu His Arg Glu Glu Asn Pro Glu Gln Gly Val Val Glu	
35 40 45	
Ile Met Met Ala Pro Ala Ala Lys Leu Thr Glu His Met Thr Gln Val	
50 55 60	
Gln Val Met Ala Pro Leu Asn Asp Glu Ser Thr Val Ala Lys Trp Leu	
65 70 75 80	
Ala Lys His Asn Gly Arg Ala Gly Leu His His Met Ala Trp Arg Val	
85 90 95	
Asp Asp Ile Asp Ala Val Ser Ala Thr Leu Arg Glu Arg Gly Val Gln	
100 105 110	
Leu Leu Tyr Asp Glu Pro Lys Leu Gly Thr Gly Gly Asn Arg Ile Asn	
115 120 125	
Phe Met His Pro Lys Ser Gly Lys Gly Val Leu Ile Glu Leu Thr Gln	

130
Tyr Pro Lys Asn
145

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